

Saturday Magazine.

No. 164.

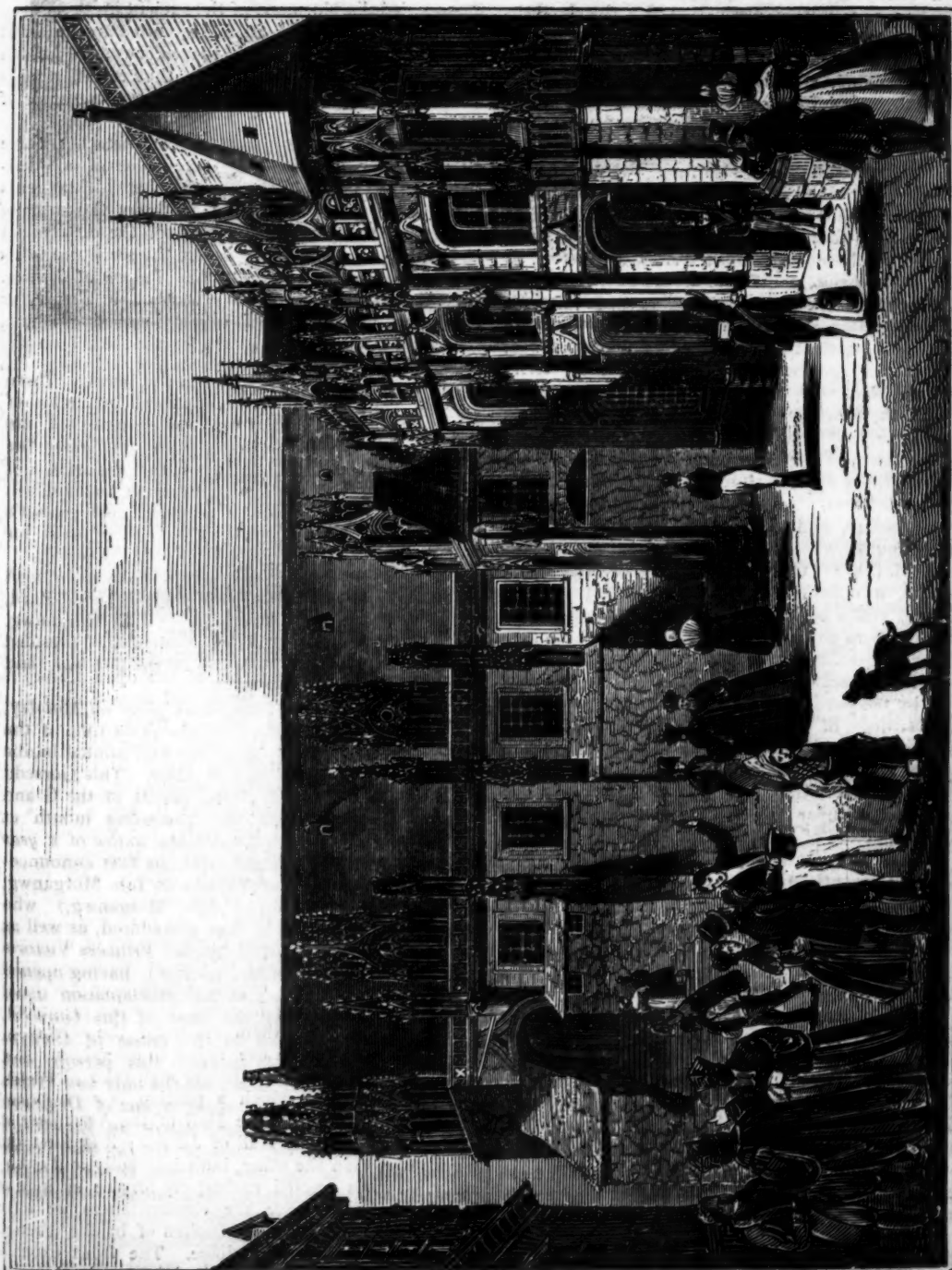
JANUARY

24TH, 1835.

PRICE
ONE PENNY.



UNDER THE DIRECTION OF THE COMMITTEE OF GENERAL LITERATURE AND EDUCATION,
APPOINTED BY THE SOCIETY FOR PROMOTING CHRISTIAN KNOWLEDGE.



THE PALACE OF JUSTICE, AT ROUEN, IN NORMANDY.

THE PALACE OF JUSTICE AT ROUEN.

It would be difficult to find in the whole of Europe, a district more rich in specimens of early splendid modern architecture, than that part of France which was formerly comprehended under the name of the province of Normandy; at all events, when we call to mind the connexion that formerly subsisted between the ancient duchy of that title and our own country, we are quite sure that it would be impossible to find out of England one which should be equally remarkable in that respect, and at the same time equally interesting to Englishmen in general. The city of Rouen contributes its full share of the attraction which has earned this distinction for the land in which it lies; its ecclesiastical buildings are among the finest in existence. Few cities in the world possess two such specimens of Gothic architecture as the Cathedral of Notre Dame, and the Abbey Church of St. Ouen*;—indeed, the latter is often called the finest Gothic edifice in France. Nor are the secular buildings of this city less worthy of mention; they include some of the most beautiful examples of the adaptation of the Gothic style to civil purposes that are to be found anywhere. At the head of these stands the *Palais de Justice*, or Palace of Justice, which is represented in the engraving contained in the preceding page; it is a highly interesting specimen of the sumptuous taste of the age in which it was erected, and forms, indeed, as one of our countrymen expresses it, the "civil" lion of the place.

It is not, however, on account of its intrinsic beauty alone, that the Palace of Justice is remarkable; the importance of the purposes to which it has been at various times applied, imparts to it a considerable degree of interest. At present, it is occupied as a court of justice, and serves as the place of election for the deputies who are returned from hence to the French House of Commons; under the old order of things, it constituted a hall of meeting for the provincial states of the duchy of Normandy, one of those miniature parliaments which existed in France previous to the Revolution; while, to mount a step higher in the scale of antiquity, before it was employed by the parliament, it used to be appropriated to the sittings of the ancient Court of Exchequer. From its origin, indeed, it was devoted to judicial purposes, or in French phrase, was "destined to be the sanctuary of the laws, and of justice." The circumstances under which it was founded are these.

Until the close of the fifteenth century, there did not exist in Normandy any stationary court of judicature, the execution of the laws being intrusted to an ambulatory tribunal, called the Exchequer, which was established by Rollo, the first duke. This court, like the ancient parliaments of the kings of France, ordinarily held its sittings twice a year—in spring and in autumn; the place of its meeting depended on the pleasure of the sovereign, and was usually determined as in the case of the English *Aula Regia*, by his presence. This mode of administering justice was necessarily attended with great inconveniences, and accordingly in the year 1499, a petition was addressed by the provincial estates to the king of France, praying him to establish in the chief city of the province, a judicial tribunal, which should be fixed and permanent, like those already established in other cities of the kingdom. Louis the Twelfth, so celebrated as the good king, then occupied the throne, and the French writers say that it would have been impossible for a monarch who had shown so much regard for the happiness of his people, to

refuse granting a privilege so obviously conducive to their good. The king did not refuse; by an edict of the same year as the application, the court of Exchequer of Normandy was declared to be "fixed for ever in the good city of Rouen," and was directed "to hold its sittings in the great hall of the castle, till such time as another suitable place should be made ready." It was to provide such a place that the Palace of Justice was erected; a very few years, however, elapsed, before the court ceased to hold its sittings in the building so especially founded for it.

"The name of Exchequer," says Mr. Dawson Turner, "was perhaps displeasing to the crown, as it reminded the Normans of the ancient independence of their duchy; and in 1515, Francis the First ordered that the court should thenceforward be known as the Parliament of Normandy, thus assimilating it in its appellation to the other supreme tribunals of the kingdom."

The palace, in its present form, presents three distinct buildings, forming three sides of a quadrangle. The oldest of these is the one which appears in the front of our engraving; it bears the name of the *Salle des Procureurs* (or Hall of the Attornies,) and was erected six years before the structure to its right, which is more strictly the Palace of Justice. Its original destination was that of a *Bourse*, or Exchange, and the chief object in raising it was, according to the edict issued by the bailiff on the occasion, to put a stop to the impiety of those who were in the habit of assembling in the cathedral, even on festival days, for the purpose of transacting business. The exterior of this building is simple; the richest part is the gable, which has on either side an octangular turret decorated with what architects call "crocketed pinnacles" and flying buttresses.

The interior consists of a noble hall, which is raised above a basement, originally intended as a place for shops, but now forming a part of the prison. The length of the room is upwards of 160 feet, and its breadth more than fifty; the appearance which it presents is grand and imposing. The roof is of timber; it is a plain arch, extremely bold, and destitute, as Mr. Turner remarks, of the open tie-beams and arches, or the knot-work and cross-timber that usually adorn the old English roofs. The wood employed is oak; and the dark colour which it has acquired by age, contributes much to the solemn appearance of this vaulted apartment. The only ornaments to be found within it, are a series of niches running round the walls; the workmanship of these is delicate, but they are all unoccupied.

Peter Heylin, an English divine, who visited France in the earlier part of the seventeenth century, describes the building thus: "In the great hall into which you ascend by some thirty steps or upwards, are the seats and desks of the procurators; every one's name written in capital letters over his head. These procurators are like our attornies to prepare causes, and to make them ready for the advocates. In this hall do suitors use either to attend on, or to walke up and down, or to confer with their pleaders."

The building, of which a portion is seen in our view, to the right of the Hall of the Attornies, is, strictly speaking, the Hall of Justice; it is far more sumptuous than the other, both internally and externally. It was erected exclusively for the sittings of the Exchequer, under the circumstances we have already mentioned; and is spoken of by the French writers as a magnificent edifice. The front extends in width more than two hundred feet, and "is decorated," say Jolimont, "with every thing that is most delicate and most rich in the architecture of its age."

* To be described in future papers.

This observation is peculiarly applicable to the oriel or tower of highly-enriched workmanship, which projects from the middle of the front; it is extremely beautiful in its appearance, and serves well to break the uniformity of the elevation. Unfortunately, however, only one-half of this superb specimen of Gothic architecture preserves its original splendour; the other portion has lost all its decorations, or has been subjected to degrading alterations.

"Here," says M. de Jolimont, "as so frequently elsewhere, we may remark the fatal effect of the prejudices of the last century against every thing which ignorance styled Gothic, and of the blameable precipitation which too often caused the most precious monuments of preceding ages to be sacrificed to puerile considerations, or ill-judged motives of economy."

The interior of this building corresponds with its exterior; its appearance is truly magnificent. It consists of two portions, the Great Chamber, and the *Chambre de Conseil*, what we may call the Council Chamber. The first, or the apartment in which the parliament used anciently to meet, and in which the judicial sittings are now held, surpasses the other in splendour, and still remains comparatively uninjured. Heylin, who must have seen it in its best days, speaks of "this tribunal and seat of justice" very highly;—"a chamber," he says, "so gallantly and richly built, that I must needs confesse it far surpasseth all the rooms that ever I saw in my life. The palace of the Louvre hath nothing in it comparable; the ceiling all inlaid with gold, and yet did the workmanship exceed the matter." This ceiling has excited the admiration of more modern travellers than Heylin. Mr. Turner calls it a gorgeous specimen of the taste of the times in internal decorations; "the oak," he says, "which age has rendered almost as dark as ebony, is divided into compartments, covered with rich but whimsical carving, and relieved with abundance of gold."

The building that fronts the Hall of the Attornies, and forms the third side of the quadrangle, is of much more modern erection than the rest of the collection. It is not of earlier date than the beginning of last century, and was erected in consequence of the changes which, in the lapse of time, had been introduced into the administration of justice. Its front is in the Greek style, being an imitation of the Ionic order, and presenting little but a range of pilasters, raised on an arcade. This, as will at once be supposed, harmonizes very badly with the other buildings, and produces an unfavourable effect. No part of it is shown in our view.

This detailed description, and an inspection of the accompanying engraving, will at once convince our readers, that the Palace of Justice is a very magnificent building. The French writers regard it as one of the most remarkable and important productions of the age of Louis the Twelfth; and the inhabitants of Rouen esteem it as the first among their secular buildings. Our countrymen have not been backward in acknowledging its merits. Peter Heylin speaks of "that fair palace wherein justice is administered" as "a very graceful and delectable building;" "that of Paris," he says, "is but a chaos or a Babel to it." Travellers of a more modern age have been equally laudatory; they all seem to regard the Hall of Justice at Rouen, as one of the chief attractions of a city so very attractive to architects and lovers of the picturesque. There is one, however, among them, who is more disposed to find faults than the rest; and that one is Dr. Dibdin, the lover of books. "This building," says that learned gentleman, "pre-

cisely marks the restoration of Gothic taste in France, and the peculiar style of architecture which prevailed in the reign of Francis the First. To say the truth, this style, however sparkling and imposing, is objectionable in many respects: for it is, in the first place, neither pure Gothic nor pure Grecian, but an injudicious mixture of both. Greek arabesque borders are running up the sides of a portal, terminating in a Gothic arch; and the Gothic ornaments are not in the purest or the most pleasing taste. Too much is given to parts and too little to the whole. The external ornaments are frequently heavy from their size and elaborate execution; and they seem to be stuck on to the building without rhyme or reason." Nevertheless, even this unfavourable critic admits that "upon the whole, this *Town-hall*, or call it what you will, is rather a magnificent erection, and certainly very much superior to any provincial building of the kind which we possess in England."

We must not omit to mention, that in the immediate neighbourhood of the Palace of Justice, there is a small square, celebrated in the annals of the city as the spot on which the famous *Jeune d'Arc*, or Joan of Arc, was burned for alleged witchcraft. It long bore the name of *Place de la Pucelle*, or Place of the Maiden, which it derived from its connexion with the history of this unfortunate woman, who, as our readers know, was commonly called *La Pucelle d'Orleans*, or, as we say, "the Maid of Orleans;" it is now, however, used as a market-place. The square of the Palace of Justice itself was originally the scene of a market also; but the noise of the traffic, and the quarrels of the fishwomen, being a sad interruption to the eloquence of the pleaders, the market was removed by the civic authorities, on the application of the parliament.

VOYAGE ON THE MISSISSIPPI.

On the second morning after our departure from Louisville, a change in the general character of the river seemed to indicate that we were rapidly approaching the Mississippi. For about fifty miles before the point of union, the surrounding scenery is flat, and the breadth of the Ohio is more than doubled, as if, from a feeling of rivalry, the river-god had expanded his waters to the utmost. On the present occasion, the Ohio had the advantage of being very full, from the melting of the snows along the whole line of its course, while the Mississippi, descending from higher latitudes, had experienced no such augmentation.

For hours I was on the tiptoe of expectation, to catch the first glimpse of "the father of rivers," and, with this view, had taken up a station on the highest pinnacle of the forecastle. At length, when yet about five miles distant, the Mississippi, sailing along in dark and solemn grandeur, became distinctly visible. Both rivers were about two miles broad, but the expanse of the Ohio struck me as being somewhat larger than that of its more powerful rival. I do not remember any occasion on which my imagination was more excited; I felt, in parting with the Ohio, as if I had done injustice to its attractions. True, it presents but one style of beauty, but that is of the noblest character. For a distance of nine hundred miles, I had beheld it roll its clear waters, smoothly and peacefully, and I now, almost with a feeling of regret, bade it farewell.

We passed the small settlement of Cairo, standing on an isthmus between the two rivers, and in a few minutes, beheld ourselves borne on the most majestic tribute of waters which Earth pays to Ocean.

It certainly appears strange that the Mississippi, after absorbing the Ohio, presents no visible augmentation of its volume. Below the point of junction, the river is not broader than the Ohio alone. Though flowing in the same channel, the streams are not mingled. For many miles there is a distinct line of demarcation between the waters of the two rivers. Those of the Ohio are clear, while the stream of the Mississippi is ever dark and turbid. When the Mississippi is in flood, it almost dams up the Ohio, and suffers it to occupy but a small portion of the common channel.

After quitting *la belle rivière*, as the French first designated the Ohio, one feels as if he had made an exchange for the worse. The scenery of the Mississippi is even less varied than that of the Ohio. It is almost uniformly flat, though in the course of twelve hundred miles, a few bluffs and eminences do certainly occur. The wood grows down to the very margin of the river; and the timber, for some hundred miles, is by no means remarkable for size. As the river descends to the southward, however, it is of finer growth; and about latitude 30°, vegetation becomes marked by a degree of rankness and luxuriance which I have never seen any where else.

The American forests are generally remarkable for the entire absence of underwood, so that they are easily penetrable by a foot-traveller, and generally, even by a mounted one. But, in the neighbourhood of the Mississippi, there is, almost uniformly, a thick undergrowth of cane, varying in height from four or five to about twenty feet, according to the richness of the soil. Through this thicket of cane, I should think it quite impossible to penetrate; yet, I have been assured, the Indians do so for leagues together, though by what means they contrive to guide their course, where vision is manifestly impossible, it is not easy to understand.

It has been the fashion with travellers, to talk of the scenery of the Mississippi as wanting grandeur and beauty. Most certainly, it has neither. But there is no scenery on earth more striking. The dreary and pestilential solitudes, untrodden, save by the foot of the Indian; the absence of all living objects, save the huge alligators, which float past, apparently asleep, on the drift-wood; and an occasional vulture, attracted by its impure prey on the surface of the waters; the trees, with a long and hideous drapery of pendent moss, fluttering in the wind; and the giant river, rolling onward the vast volume of its dark and turbid waters through the wilderness, form the features of one of the most dismal and impressive landscapes on which the eye of man ever rested. Rocks and mountains would add nothing of sublimity to the Mississippi. Pelion might be piled on Ossa; Alps on Andes; and still, to the heart and perceptions of the spectator, the Mississippi would be *alone*. It can brook no rival, and it finds none. No river in the world drains so large a portion of the earth's surface. It is the traveller of five thousand miles, more than two-thirds of the diameter of the globe. The imagination asks, whence come its waters, and whither tend they? They come from the distant regions of a vast continent, where the foot of civilized man has never yet been planted. They flow into an ocean yet vaster, the whole body of which acknowledges their influence. Through what varieties of climate have they passed? On what scenes of lonely and sublime magnificence have they gazed? In short, when the traveller has asked and answered these questions, and a thousand others, it will be time enough to consider how far the scenery of the Mississippi would be improved by the presence of

rocks and mountains. He may then be led to doubt whether any *great* effect can be produced by a combination of objects of discordant character, however grand in themselves. The imagination is, perhaps, susceptible but of a single powerful impression at a time. Sublimity is uniformly connected with unity of object. Beauty may be produced by the happy adaptation of a multitude of harmonious details; but the highest sublimity of effect can proceed but from one glorious and paramount object, which impresses its own character on every thing around.

The prevailing character of the Mississippi is that of solemn gloom. I have trodden the passes of Alp and Appenine, yet never felt how awful a thing is nature, till I was borne on its waters, through regions desolate and uninhabitable. Day after day, and night after night, we continued driving right downward to the south; our vessel, like some huge demon of the wilderness, bearing fire in her bosom, and canoping the eternal forest with the smoke of her nostrils. How looked the hoary river-god, I know not; nor what thought the alligators, when awakened from their slumber by a vision so astounding. But the effect on my own spirits was such as I have never experienced before or since. Conversation became odious, and I passed my time in a sort of dreamy contemplation. At night, I ascended to the highest deck, and lay for hours gazing listlessly on the sky, the forest, and the waters, amid silence only broken by the clanging of the engine. All this was very pleasant; yet, till I reached New Orleans, I could scarcely have smiled at the best joke in the world; and as for raising a laugh,—it would have been quite as easy to square the circle.

The navigation of the Mississippi is not unaccompanied by danger, arising from what are called *planters* and *sawyers*. These are trees firmly fixed in the bottom of the river, by which vessels are in danger of being impaled. The distinction is, that the former stand upright in the water, the latter lie with their points directed down the stream.

The bends or flexures of the Mississippi are regular in a degree unknown in any other river. The action of running water, in a vast alluvial plain like that of the basin of the Mississippi, without obstruction from rock or mountain, may be calculated with the utmost precision. Whenever the course of a river diverges in any degree from a right line, it is evident that the current can no longer act with equal force on both its banks. On one side the impulse is diminished, on the other increased. The tendency in these sinuities, therefore, is manifestly to increase, and the stream which hollows out a portion of one bank, being rejected to the other, the process of curvature is still continued, till its channel presents an almost unvarying succession of salient and retiring angles.

In the Mississippi, the flexures are so extremely great, that it often happens that the isthmus which divides different portions of the river gives way. A few months before my visit to the south, a remarkable case of this kind had happened, by which forty miles of navigation had been saved. The opening thus formed, was called the *new cut*. Even the annual changes which take place in the bed of the Mississippi are very remarkable. Islands spring up and disappear; shoals suddenly present themselves, where pilots have been accustomed to deep water; in many places, whole acres are swept away from one bank and added to the other; and the pilot assured me, that in every voyage, he could perceive fresh changes.

Many circumstances contribute to render these changes more rapid in the Mississippi, than in any other river. Among these, perhaps, the greatest is



THE MISSISSIPPI OVERFLOWING ITS BANKS.

the vast volume of its waters, acting on alluvial matter, peculiarly penetrable. The river, when in flood, spreads over the neighbouring country, in which it has formed channels, called *bayous*. The banks thus become so saturated with water, that they can oppose little resistance to the action of the current, which frequently sweeps off large portions of the forest.

The immense quantity of drift-wood is another cause of change. Floating logs encounter some obstacle in the river, and become stationary. The mass gradually accumulates; the water, saturated with mud, deposits a sediment, and thus, an island is formed, which soon becomes covered with vegetation. About ten years ago, the Mississippi was surveyed by order of the government; and its islands, from the confluence of the Missouri to the sea, were numbered. I remember asking the pilot the name of a very beautiful island, and the answer was, five-hundred-and-seventy-three, the number assigned to it in the hydrographical survey, and the only name by which it was known.

A traveller on the Mississippi has little to record in the way of incident. For a week we continued our course, stopping only to take in wood, and on one occasion to take in cargo, at an inconsiderable place called Memphis, which stands on one of the few bluffs we encountered in our progress. At length we reached Natchez, a town of some importance in the state of Mississippi. We only halted there for an hour.

One of the most striking circumstances connected with this river-voyage, was the rapid change of climate. Barely ten days had elapsed since I was traversing mountains almost impassable from snow. Even the level country was partially covered with it, and the approach of spring had not been heralded by any symptom of vegetation. Yet, in little more than a week, I found myself in the region of the sugar-canes.

The progress of this transition was remarkable. During the first two days of the voyage, nothing like a blossom or a green leaf was to be seen. On the third, slight signs of vegetation were visible on a few of the hardier trees. These gradually became more general as we approached the Mississippi; but then, though our course lay almost due south, little change was apparent for a day or two. But after passing Memphis, in latitude 35° , all nature became alive. The trees which grew on any little eminence, or which did not spring immediately from the swamp, were covered with foliage; and at our wooding-times, when I rambled through the woods, there were a thousand shrubs already bursting into flower. On reaching the lower regions of the Mississippi, all was brightness and verdure. Summer had already begun, and the heat was even disagreeably intense.

Shortly after entering Louisiana, the whole wildness of the Mississippi disappears. The banks are all cultivated, and nothing was to be seen but plantations of sugar, cotton, and rice, with the houses of their owners, and the little adjoining hamlets inhabited by the slaves. Here and there were orchards of orange-trees, but these occurred too seldom to have much influence on the landscape.

[Men and Manners in America.]

SIR HUMPHRY DAVY, BART.

Justice exacts, that those by whom we are most benefited, should be most honoured. — *Rambler*.

SIR HUMPHRY DAVY was born on the 17th of December, 1778, at Penzance, in Cornwall, in which county his family had long resided. His education was commenced by the Rev. I. C. Coryton, and continued under the care of the Rev. Dr. Cardew, of Truro, until the period of his apprenticeship to Mr. Borlase, at that time a respectable

apothecary at Penzance. The direction of his genius was immediately displayed; the study of chemistry became his daily occupation, and its experiments his amusement. He might, however, have pined in obscurity, and have wasted his energies upon various pursuits, but for an accidental introduction to Mr. Davies Gilbert, by whom his genius was discerned, his opportunities for improvement increased, and his inclinations confirmed. By the kindness of that gentleman, Davy was introduced to Dr. Edwards, then residing at Hayle Copper House, who, possessing a well-appointed laboratory, enabled him to pursue his studies with pleasure and success. To the same benevolent patron, he owed his introduction to Dr. Beddoes, then engaged in establishing the Pneumatic Institution at Bristol, with whom he was associated, in 1798, before he had attained his twentieth year. The chief object of this institution was, to investigate the medical powers of factitious airs or gases, and to Mr. Davy was assigned the office of conducting the various experiments. He here added to his friends, and increased his reputation, by the publication of *Essays on Heat, Light, and the Combinations of Light, &c.*, and also by his researches concerning Nitrous Oxide, and its respiration. Experiments connected with these works, were succeeded by one upon Carburetted Hydrogen Gas, by which his life was nearly sacrificed to his scientific zeal. To recruit his strength, he retired for some period into Cornwall.

In 1801, the report of his abilities had interested Count Rumford in his favour, who introduced him to Sir Joseph Banks, and Mr. Cavendish; and at a meeting of the managers, on the 16th of February, 1801, he was appointed to the situation of assistant lecturer in chemistry, and director of the laboratory in the Royal Institution. Excursions into the country had, together with some desultory lectures, engaged him till the 21st of January, 1802, when a "crowded and delighted audience assembled at his introductory lecture."

High moral feelings, just principles, extensive research, earnest hopes for the improvement of mankind, by the means of education, and the application of scientific truths, expressed in language rich in thought, and vigorous in expression, could not fail of its effect; "his society thenceforth, was courted by all, and all were proud of his acquaintance." He was appointed on the 31st of May, Professor of Chemistry to the Institution, a sufficient proof, says Dr. Paris, of the universal feeling of admiration his lectures had excited.

The fatigues of the season, induced a tour into Wales; and at his return, he contributed to the Journal of the Royal Institution "An Account of a new Eudiometer," and some papers "On Painting on Glass," and one on Galvanic Combinations, led to his election as a Member of the Royal Society, to which it had been read. Lectures on Tanning, and on Agriculture, together with other literary pursuits, were successfully continued till the year 1807, when he was elected Secretary of the Royal Society, being then about to engage in those experiments by which he subsequently developed the law of Voltaic Action. In the course of his discoveries, and ascertainment of the principal facts in Electro Chemistry, his attention was directed to one very important application of its power. This was, as to the means of preventing the corrosion of copper on ships, by the action of sea-water, which he thought might be suspended or prevented, by giving a negative or repelling power to the copper, by attaching metals, such as zinc, or tin, to the vessels. The results of this investigation were detailed in the BAKERIAN

LECTURE of 1806, and such was the impression it produced, that he received from the Institute of France, the medal founded by Napoleon.

Excitement of mind, and waste of bodily energy, consequent upon avocations of this nature, together with that continued intercourse with society, which allowed him no repose, at length so fearfully affected him, as to leave him for five weeks in a state of the utmost danger. By the most unremitting attention of his friends, and the exertion of the great skill of his physicians, Drs. Babington and Franck, his life was saved, and he was again enabled to resume his duties at the Institution. Shortly prior to this, he had been engaged in investigating the properties of the "Fixed Alkalies," the results of which, he detailed in his second BAKERIAN LECTURE, read in Nov. 1807, in which he announces the discovery of their metallic bases. To facilitate his researches, a public subscription was opened, and by the liberal aid afforded, a most magnificent Voltaic battery, consisting of 2000 pairs of plates, was speedily put in operation. In May 1810, he delivered a series of Lectures, on agricultural chemistry, &c., before the Dublin Society, and received the honorary degree of L.L.D., together with the honour of Knighthood from the Prince Regent, as a testimony of respect for his scientific merit. On the 11th of April, 1812, Sir Humphry married Mrs. Apreece, the widow of Shuckburgh Ashby Apreece, Esq., daughter and heiress of Charles Kerr, of Kelso.

It was in 1813, that through his good efforts, Mr. Faraday was introduced to the Royal Institution, by which means the scientific world is still enriched by discoveries in that very path of inquiry which his own genius had explored. By permission of Napoleon, and accompanied by Lady Davy and Mr. Faraday, he, in October of this year, visited the continent, where he was received with the kindest interest; and during a tour of eighteen months, he was assisted by Mr. Faraday, in a series of various scientific experiments, principally on Iodine, a substance accidentally discovered by M. Courtois, and on the Diamond, in which Professor Morrichini also engaged. These papers were transmitted to the Royal Society, by whom they were published, as were others on "Ancient Colours" and on "Acids." We are now arrived at the period of the construction of the "Safety Lamp," which endeared him to society as much by the humanity of his motives, as for the talents he displayed. It had been computed, that in seven years upwards of 300 pitmen had been killed by repeated explosions of fire-damp. An accident of this kind occurred near Sunderland, at Felling Colliery, in 1812.

This mine was considered as the best ventilated, and most perfect in the arrangement of its machinery. On the 25th of May, the neighbouring villages were alarmed by a terrible explosion, and immediately the pit was thronged by the wives and children of the men who had been engaged below. Nine intrepid persons, animated by the hope of saving their companions, descended into the pit; but their progress was soon intercepted by the *choak-damp*, into which the sparks from their steel-mills fell like drops of blood. Half-suffocated they attempted to return, but were shortly stopped by a thick smoke which stood like a wall before them. The certainty of the mine being then on fire, and the fear of another explosion, forced them to ascend; nor was it till the 8th that the mine could be effectually explored. The bodies were found under various circumstances: twenty-one were upon one spot, in horrible confusion; the power of the fire was visible upon all, but its

effects were very various: while some were almost torn to pieces, others appeared to have sunk as overpowered by sleep. The total loss by this explosion was 92 pitmen, and 126 persons were left in the utmost poverty and distress.

The feelings this excited occasioned the establishment of a society, under the auspices of the Rev. Dr. Gray, of Bishop Wearmouth, and of Mr. Wilkinson of London, to prevent accidents in coal-mines. Dr. Gray accordingly wrote to Sir Humphry, who instantly instituted such experiments as led him to discover and apply the principles of the Safety Lamp. Its construction may be thus stated.

The fire-damp is a species of inflammable gas (carburetted hydrogen,) which, when mingled with atmospheric air in certain proportions, explodes on contact with flame. To prevent this, Sir Humphry enclosed a lighted lamp within a perfect cage of wire gauze, by which means no flame is enabled to penetrate from within to the surrounding medium, in consequence of the cooling power of the metallic tissue, which is referable to its excellent conducting properties for heat, of which it becomes a powerful radiator. As a testimony of his feeling appreciation of the importance of this discovery, his late Majesty bestowed upon Sir Humphry the dignity of a baronet; and the proprietors of the different coal-mines presented him with a service of plate, at a dinner to celebrate the event.

On the 26th of May, 1818, he again embarked for the continent, to undertake the unrolling of the papyri found at Herculaneum, in which he was unsuccessful. By the death of Sir Joseph Banks, he became president of the Royal Society, and was again engaged on continued researches in electro-magnetism, to elicit some plan for the protection of the copper-sheathing of ships. The more fully to test the results, he embarked on board the Comet steam-vessel, bound to Heligoland, touching also at the different ports of Norway and Sweden; and on his return he was rewarded by the gift of the Royal Medal, the only honour remaining the Royal Society had it now in their power to bestow. His plan was submitted, tried, and finally abandoned by government, as it was discovered that the same cause which preserved the copper, encouraged the adhesion of marine productions. Illness, the consequence of mental irritation, and debility, probably the result of incessant pursuits, had so affected him, that at the earnest desire of his friends, he, in 1827, removed to Ravenna, where he solaced the hours of pain by the composition of *Salmonia*.

He now resigned the presidency of the Royal Society, and proceeded from Ravenna to Rome, where he wrote the *Consolations of Travel, or, the Last Days of a Philosopher*. These, indeed, were drawing rapidly to a close: he was seized with another paralytic attack, and being joined immediately by Lady Davy and his brother, was removed upon a slight improvement, at his own most urgent request, to Geneva, where he arrived on the 28th of May, 1829. After dining, he appeared cheerful, and at twelve he retired to rest; but shortly after his brother was summoned, to whom, on entering the room, he said, "I am dying." He again rallied, and at a quarter before three he expired.

Sir Humphry Davy combined qualities we but rarely find united. Great quickness of perception, a peculiarly retentive memory, a vivid imagination, together with habits of the most laborious investigation, enabled him to achieve discoveries which made his life equally honourable and useful. His disposition was amiable and kind, he remembered with

peculiar pleasure the scenes of his boyhood, and no alteration of fortune or situation could wean him from the friendships of his early years. Science was with him no grovelling pursuit, for mere distinction, or the acquisition of wealth, but to use his own language, it was "the love of knowledge, or of intellectual power, which is in fact, in its ultimate and most perfect developement, the love of infinite Wisdom, or the love of God." S. H.

[This account has been abridged from the *Life of Davy*, by Dr. L'arris, of which, from the necessary limits of this Magazine, it presents a mere outline.]

A PERSIAN DOCTOR AND THE ELECTRIC MACHINE.

At Isfahan all were delighted with the electric machine, except one renowned doctor and lecturer of the college, who, envious of the popularity gained by this display of superior science, contended publicly, that the effects produced were moral, not physical,—that it was the mumery we practised, and the state of nervous agitation we excited, which produced an ideal shock; but he expressed his conviction, that a man of true firmness of mind would stand unmoved by all we could produce out of our glass-bottle, as he scoffingly termed our machine. He was invited to the experiment, and declared his readiness to attend at the next visit the Begler-Beg paid the Elchee.

The day appointed soon arrived. The Begler-Beg came with a numerous retinue, and, amongst others, the doctor, whom we used to call "Red Stockings," from his usually wearing scarlet hose! He was, we found, notwithstanding his learning and reputed science, often made an object of mirth in the circles of the great and wealthy at Isfahan, from the pertinacity with which he maintained his dogmas.

The philosopher, notwithstanding various warnings, came boldly up, took hold of the chain with both hands, planted his feet firmly, shut his teeth, and evidently called forth all his resolution to resist the shock. It was given, and poor Red Stockings dropt on the floor as if he had been shot. There was a momentary alarm; but on his almost instant recovery, and the Elchee explaining that the effect had been increased by the determination to resist it, all gave way to one burst of laughter. The good-natured philosopher took no offence. He muttered something about the re-action of the feelings after being overstrained, but admitted there was more in the glass-bottle than he had anticipated.—*Sketches of Persia*.

THE TRUE USE OF KNOWLEDGE.

HALF our pleasures, our best pleasures, the most innocent and congenial to our nature as rational beings, are derived from the acquisition of ornamental knowledge, the pursuit of entertaining science, or the practice of elegant arts. So far therefore, as mental recreation is requisite for man, the study of such things may be justified without referring to any thing but the satisfaction of the individual himself in his vacant hours. But beyond the point of strict necessity for relaxation, this reason will never extend. There must be a higher aim, an honourable and substantial end to be gained, before any considerable employment of the powers of the understanding in the acquisition of any lighter species of intellectual attainment can be fairly vindicated; and that vindication, the difficulties of Scripture afford. For the golden chain of science is so firmly and admirably formed, that it would be impossible to take away the least link without injuring the strength and beauty of the whole. Since, therefore, the whole body of knowledge tends, in consequence of the existence of difficulties, to the elucidation of Scripture, the cultivation even of the merely ornamental parts of learning, is requisite to the defence of revelation, and consequently, justifiable in a still larger extent than it would otherwise have been. The minutest branches of philosophy, and the most trivial recreations of the mind, thus become important in a religious point of view. We are evidently, therefore, and deeply indebted to the difficulties of Scripture, because by making every species of knowledge subservient to the illustration and vindication of religious truth, they have dignified and sanctified, as it were, the scientific amusements of our leisure hours, and heightened the pleasure of studying the subordinate branches of literature, by teaching us that we may be usefully employed, even in our intellectual relaxations.—BENSON.

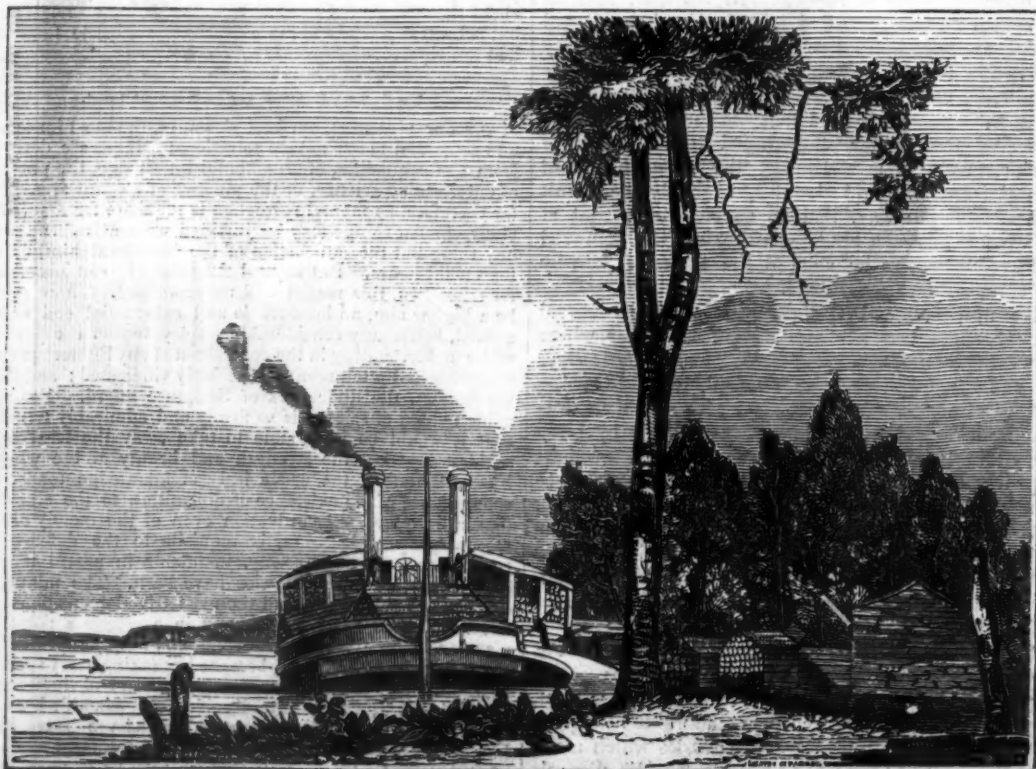
ON THE STUDY OF NATURE.

IN the original constitution of things, it is wisely ordered, that happiness shall be found every where about us. We do not need to have a rock smitten, to supply this thirst of the soul; it is not a distant good; it exists in every thing above, around, and beneath our feet; and all we want, is an eye to discern, and a heart to feel it. Let any one fix his attention on a moral truth, and it spreads out and enlarges its dimensions beneath his view, till what seemed at first as barren a proposition as words could express, appears like an interesting and glorious truth, momentous in its bearings on the destinies of men. And so it is with every material thing; let the mind be intently fixed upon it, and hold it in the light of science, and it gradually unfolds new wonders. The flower grows even more beautiful, than when it first opened its golden urn, and breathed its incense on the morning air; the tree, which was before thought of only as a thing to be cut down and cast into the fire, becomes majestic, as it holds its broad shield before the summer sun, or when it stands like a ship, with its sails furled, and all made fast about it, in preparation for the winter storm.

All things in nature inspire in us a new feeling, and we begin to consider their fate and fortunes, their birth and decay, as resembling those of man. The truth is, that ignorance and indifference are almost the same, and we are sure to grow interested, as fast as our knowledge extends, in any subject whatever. This explains how men of great ability are so engaged in what are often ignorantly regarded as little things; how they can watch with the gaze of a lover, to catch the glance of the small bird's wing, or listen to its song, as if it were the breath of a soul; how the world, and every thing in it looks so spiritually bright to them, when to others the bird is but a flying animal, and the flower only the covering of a clod.

A devoted attachment to the works of nature is an evidence of delicacy and refinement; and the common prejudice which regards it as inconsistent with energy of thought and action, is entirely unfounded; for assuredly, the radiant files of war can show no spirits more resolute than those of the men, who leave the abodes of civilized life, launch their canoes on unbroken waters, depend on their rifle for subsistence, keep on their solitary march till the bird has sung his evening hymn, and have no society at night but the beating sound of their fire. Neither is it inconsistent with a strict regard to all the duties of life; on the contrary, it is the part of duty to draw happiness from these sources, which, in all the changes and misfortunes of life, will never cease to flow. The poet Gray, one of the most intellectual and fastidious of men, says, "happy they who can create a rose-tree, or erect a honeysuckle; who can watch the brood of a hen, or a fleet of their own ducklings as they sail upon the water." The words are true as inspiration, and we recommend them to our readers, of whom a due proportion, no doubt, are miserable. They will learn from them, what is of great importance to know, in such calculations,—that their unhappiness is owing, not to the want of pleasures, but to their not understanding how to select and enjoy those which they possess, since they are given freely and impartially to all, so that no avarice can monopolize them, and no oppression take them away. This being the case, those who point out to us the extent and variety of such resources, and show by their own example how full, rich, and inspiring they are, deserve to be recorded amongst the benefactors of mankind. No greater treasures can be offered to human desire than enjoyments like these, which at once exercise the mind, and improve the heart, repel the influence of sordid passions, and encourage the suggestions of humanity, virtue, and religion.

North American Review.



AMERICAN STEAMER AT A WOODING STATION ON THE MISSISSIPPI.